

TREATMENT OF CLOACAL PROLAPSE IN THE ESTUARINE CROCODILE

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The prolapsed and inflamed genitalia of two captive male specimens of *Crocodylus porosus* were successfully repaired following sedation of the specimen; cleansing and replacement of the genitalia and surrounding tissues; and suturing of the vent to prevent repetition of the prolapse. □ *Treatment, cloacal prolapse, Crocodylus porosus.*

Lyall Naylor, C/- Wild World, Palm Cove, Queensland 4879, Australia; 18 August, 1988.

The Estuarine Crocodile, *Crocodylus porosus* is a species which is kept frequently in, and generally adapts well to, captivity. Many specimens are held in zoological collections and

farms in Australia. One potentially serious problem with captive crocodiles results from territorial conflicts between males, even between individuals who have shared ponds harmonious-

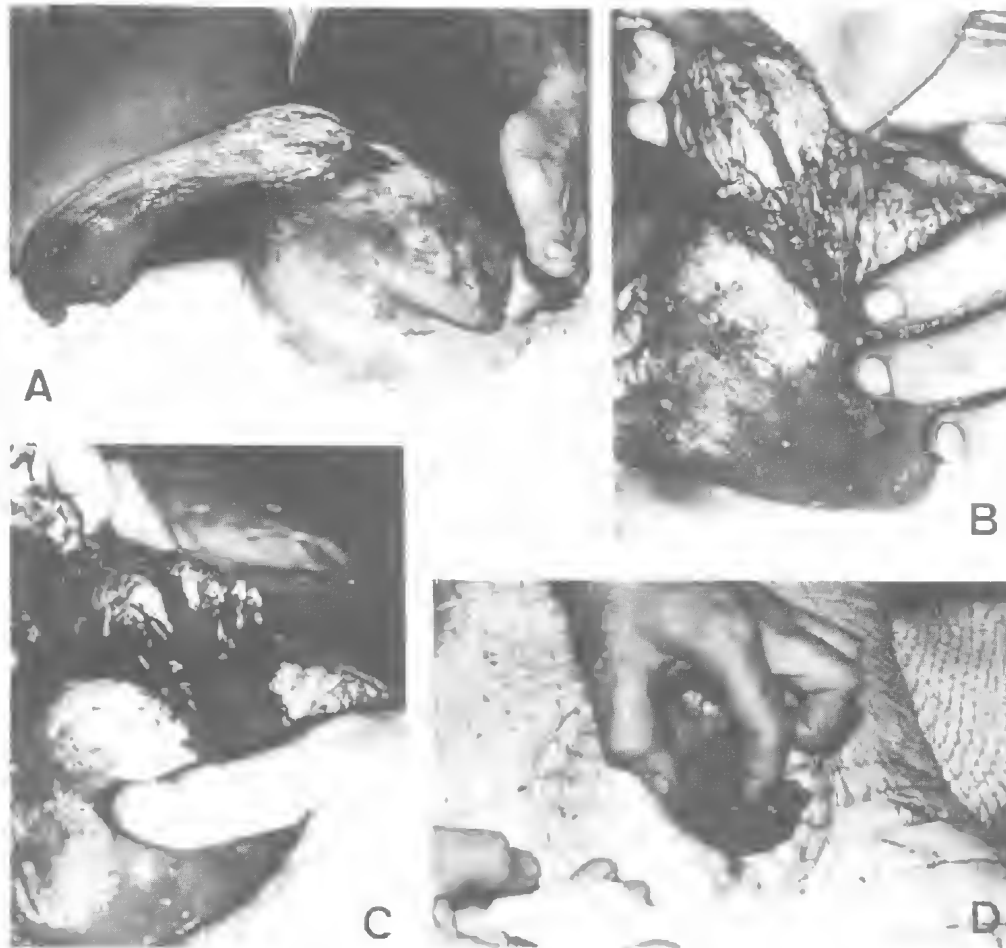


FIG. 1. A. Prolapsed and inflamed genitalia of *C. porosus*. B. Abraded tissue. C. Cleaning method. D. Replacement of genital tissue.

TABLE 1. Doses of Flaxedil and Valium required to sedate *Crocodylus porosus* specimens.

TL(m)	Drug Dose (mls)	
	Flaxedil	Valium
2.1–2.7	1–2	2–4
2.7–3.3	2–4	4–8
3.3–3.9	4–8	8–10

ly for long periods. Here, the circumstances leading to cloacal prolapse with subsequent irritation of the genital organs and successful treatment of this problem are reported for two specimens.

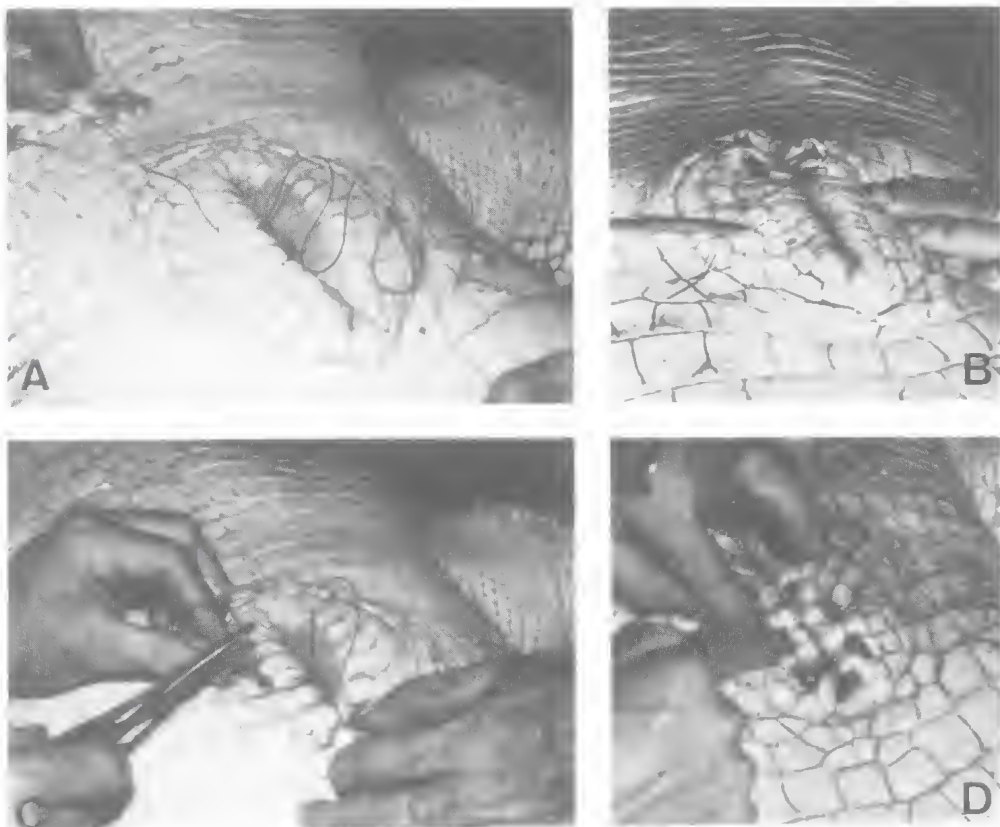
When two males fight, displaced sexual arousal can expose their genital organs. These can be severely injured, either by abrasive contact with concrete (most battles take place in concrete-lined ponds) or by an opponent (Fig. 1A,B). The prolapse can be aggravated by sand and debris. Captive crocodiles bask in favoured

sites that become denuded of grass cover and sand quickly enters the genital area and exacerbates the problem. Abrasion of the hemipenis, testicles, and surrounding soft tissue results in a serious discomfort. Crocodiles suffering from the combination of prolapse and inflamed, abraded genitalia walk with their hind legs fully extended to help hold the injured tissue above the ground to avoid further discomfort. Even at rest, they favour elevating their hindquarters.

REPAIR PROCEDURE

The crocodiles were sedated prior to surgery with Valium and Flaxedil-Gallamine (Table 1). These were administered via a syringe attached to a suitably modified 2m aluminium pole. Sedatives were injected via the neck, hind legs or butt of the tail depending on the animal's position and disposition. Once the specimens were sedated, their jaws were bound and their eyes covered.

FIG. 2. A-C. Suturing of cloacal opening. Note plastic tubing to prevent tearing. D. Completed repair.



Then the animals were positioned dorsum down on a hessian mattress.

With the specimens 'safe' and in position for surgery, Betadine surgical scrub solution (7.5% uv povidone-iodine) was applied liberally to the whole area affected. This was then rinsed with tap water (Fig. 1C). (With hindsight it is now felt that sterile saline — 0.9% sodium chloride solution — would be a more appropriate rinse). To ensure removal of all foreign bodies and cleanse the wounds this procedure was repeated several times.

The genitalia and exposed tissues were replaced in the cloaca (Fig. 1D) after the application of 50gms of socatyl-sulphonamide paste (active constituent formosulphathiazole) to facilitate placement and reduce the risk of infection.

The vent of crocodiles has an elliptical shape and this, sutured to reduce its size dramatically,

assisted prevention of repeated prolapse until healing was complete. To prevent tearing of sutures small sections of plastic tubing were affixed to entry and exit points (Fig. 2). Finally, after suturing, the whole area was washed with Betadine.

The animals were isolated during the recovery period and were not fed until the sutures were removed some six weeks after the repair. Both crocodiles have made uneventful recoveries, though the ability of these animals to breed is doubtful and, as yet, untested.

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